

## Volume-II

### **NATIONAL AGRI-FOOD BIOTECHNOLOGY INSTITUTE (NABI)**

(Department of Biotechnology,  
Ministry of Science and Technology, Govt. of India)  
Knowledge City, Sector-81, SAS Nagar, Mohali, Punjab

### **FINANCIAL BID DOCUMENT**



**Provision of fogging system and hot galvanized benches  
in existing transgenic net & greenhouse, NABI**

# **TECHNICAL SPECIFICATIONS**

## **1.0 STANDARD SPECIFICATIONS TO BE FOLLOWED**

The work should be executed as per following CPWD specification and also the specification laid in tender document. In case, above specifications are not available for certain item, then the material should conform to ISI and BIS standards.

### **1.1 Civil Engineering Works**

CPWD Specification 2009 Vol. I & II along with latest correction slips. These Specifications have replaced CPWD Specifications 1996 along with Correction Slips issued on them. These Specifications cover all types of Works. The specifications are available as a printed document issued by CPWD and also in soft copy PDF Format in CPWD website.

### **1.2 Electrical Engineering Works**

- (A) CPWD General Specifications for Electrical Works Part I Internal - 2013.
- (B) CPWD General Specifications for Electrical Works Part II External - 1994.
- (C) CPWD General Specifications for Electrical Works Part IV Sub Stations – 2013.

The above specifications shall be read with upto date correction slips (if any).

### **(A) CIVIL WORKS**

#### **WORKMANSHIP FOR THE ENTIRE PLUMBING WORK.**

The workmanship shall be best of its kind and shall conform to the specifications, as below or Indian Standard Specifications in every respect or latest trade practices and shall be subject to approval of the Engineer-in- Charge. All materials and/or Workmanship which in the opinion of the Engineer-in-Charge is defective or unsuitable shall be removed immediately from the site and shall be substituted with proper materials and/or workmanship forthwith.

#### **WARRANTY AND HANDOVER**

The Contractor shall warrant that all plant, materials and equipment supplied and all workmanship performed by him to be free from defects of whatsoever nature before handover to the Engineer-in-Charge. All the Guarantee/Warranty certificates of all the items shall be in the name of Institute i.e., National Agri-Food Biotechnology Institute (NABI), Mohali.

## **HANDING OVER OF DOCUMENTS**

All testing and commissioning shall be done by the Contractor to the entire satisfaction of the Engineer-in- Charge and all testing and commissioning documents shall be handed over to the Engineer-in-Charge.

**NOTE: In case of any contradiction between the specifications, the contractor shall take the prior approval of the Engineer- In – Charge before executing the same at site.**

### **LIST OF MAKES TO BE ADOPTED**

S. No	Item	Make
1.	Cement	J K Lakshmi/ ACC/ Ultratech/ Ambuja
2.	Steel Reinforcement (TMT bars)	Tata/JSW Jindal/ Sail/Vizag
3.	Plaster of Paris	Birla/J K Lakshmi
4.	Hot Galvanized GI work	Jindal/Apollo/Tata/Avon/Swasthik
5.	Paint	Asian Paint/ Berger/ICI
6.	Pump	Kirloskar/Crompton Greaves/KSB
7.	PVC tank	Diplast/Sintex/Supreme

**Note:** - Any other material make not mentioned above shall be ISI marked & got approved from Engg-in-charge

## BOQ for provision of fogging system and hot galvanized benches in existing transgenic net & greenhouse, NABI

S. No	Description.	Unit	Qty.	Rate		Amount
				(In figures)	(In words)	
1	Structural hot dipped GI section rustproof work riveted/bolted/welded in framed work, including cutting, hoisting, fixing in position all complete. The galvanization shall be minimum 750 GSM.	Kg	610			
2	Providing & fixing perforated aluminium work for partitions with extruded built up sections of approved make conforming to IS:733 and IS: 1286, fixing with dash fasteners of required dia and size, including necessary fitting up the gaps at junctions i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free straight mitred and jointed mechanically wherever required including cleat angle as per the directions of Engineer-in-charge.					
	Anodised coated aluminium (minimum thickness of powder coating 15micron).					
		KG	120			
3	Providing and fixing of heavy duty 75 mm dia wheels with lockable provision capable of holding load of 75 kgs	each	80			

4	<p>Supply testing, installation, commissioning of fogging system for existing transgenic net houses. The scope of work shall include main pvc pipes 63mm OD (4kg/sq cm- 60 mtr), pvc pipe 40 mm (6kg/sqcm- 60 mtr), 16mm od tube cl2 -1200 mtr, fogger 28lph- 4 way system assembly (300 nos), flush valve 40 mm (06 nos), control valve 63mm moulded seal plain (02nos), Flow filter min 20 cumtr /hr (63mm-2 nos), poly grommet take off 16x 13mm - 50 nos, barbed poly joiner - 16mm - 50 nos, line elbow 16mm- 100nos, turn buckle- 36nos, gi wire-1200 mtr and inclusive of all other minor fittings, accessories complete in all aspects. The spacing shall be kept at 2.5 x 2.5 mtr.</p> <p>The size of existing 2 nos net houses are 40 x 21 mtrs each. Bidder is advsied to visit the site and critically examine scope of work. No additional payment shall be made for any increase in quantity or additional part etc.</p>	Complete Job				
5	SITC of monobloc pump - 2HP of head 40-50 mtrs, discharge 1 litre per second including fittings, accessories, allied connection pipings etc complete in all aspects (excluding any cabling, wiring etc).	each	2			
6	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	litre	2000			

7	Earth work in excavation by mechanical means(hydraulic excavator)/manual means in foundation, trenches of drains(not exceeding 1.5 m in width, 1.5 m in depth or 10 sqm. on plan), including dressing of sides and ramming of bottoms lift , including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m.	Cum	10			
8	Providing & laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.					
	1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size)	cum	2			
9	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :					
	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size)	cum	1.3			
10	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level & above levels.					
	-Thermo-mechanically treated bars.	kg	70			
11	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth, above level in:					
	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4.35			
12	15 mm cement plaster on brick wall of mix: 1:4 (1 cement: 4 coarse sand)	sqm	36			

13	Finishing walls with Acrylic Smooth exterior paint of required shade :					
	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	sqm	18			
14	Providing and applying white cement based putty of average thickness 1mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	18			
15	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.					
A	40 mm dia nominal bore	rmt	6			
B	32 mm dia nominal bore	rmt	5			
C	25 mm dia	rmt	5			
	<b>Total Amount inclusive of GST , profits etc</b>					

**NOTE: - Payment shall be released item wise based on actual measurement examined at site by Engineer- In- Charge. Rate quoted shall be deemed to be inclusive of GST/other taxes.**

Signature/Stamp of Bidder